

## Synchronous Rectifier with Burst Mode Control

### ABSTRACT OF THE DISCLOSURE

The present invention proposes a synchronous rectifier with burst mode control. A synchronous rectifier includes a transformer having a primary winding electrically connected to a power source, a secondary winding, a first auxiliary winding, and a second auxiliary winding, a first switch and a second switch electrically connected to the secondary winding and control terminals of the first switch and the second switch individually connected to the first and second auxiliary windings for being either self-driven directly from voltages of the auxiliary windings, a third switch electrically connected between the first switch and the first auxiliary winding in series, a fourth switch electrically connected between the second switch and the second auxiliary winding in series, a detecting circuit electrically connected to an output terminal of the synchronous rectifier for detecting a load status, and a control circuit electrically connected to the detecting circuit for enabling the third switch and the fourth switch when the load status is at a heavy load and disabling the third switch and the fourth switch when the load status is at a light load.